

Application No.: 10/721,745

2

Docket No.: 5438220/2000

AMENDMENTS TO THE CLAIMS

Please replace the claims, including all prior versions, with the listing of claims below.

Listing of Claims:

Claim 1. (Previously presented) A method for producing an integrated circuit with a rewiring device, comprising:

- providing a carrier device with predefined or subsequently patterned cutouts;
- applying at least one integrated circuit upside down to the carrier device such that the cutouts of the carrier device are located above at least one connection device of the integrated circuit;
- applying an insulation device to a side of the carrier device which is not covered by the integrated circuit, omitting the at least one connection device in the cutout;
- applying the patterned rewiring device to the insulation device;
- applying a patterned solder resist device to the patterned rewiring device; and
- applying, in a patterned manner, solder balls on sections of the rewiring device which are not covered by the patterned solder resist device.

Claim 2. (Previously presented) The method according to claim 1, wherein the carrier device is a film in which at least one of the cutouts is present in the form of a stamped-out hole.

Claim 3. (Previously presented) The method according to claim 1, wherein, before application of the integrated circuit, an adhesive is applied to the carrier device.

Claim 4. (Previously presented) The method according to claim 1, wherein the carrier device is clamped in a clamping-in device.

Claim 5. (Previously presented) The method according to claim 1, wherein a multiplicity of integrated circuits are applied to the carrier device by a placement device.

VR-141480

Application No.: 10/721,745

3

Docket No.: 543822032000

Claim 6. (Previously presented) The method according to claim 1, wherein a protection device is applied above the carrier device and the at least one integrated circuit applied.

Claim 7. (Previously presented) The method according to claim 6, wherein the protection device is applied in an injection-molding or another potting or printing process and/or is subsequently partly or completely cured.

Claim 8. (Currently amended) The method according to claim ~~[[8]]~~1, wherein a polymer is applied as the insulation device.

Claim 9. (Previously presented) The method according to claim 8, wherein the insulation device is printed on or produced in a photolithographic process.

Claim 10. (Previously presented) The method according to claim 8, wherein the patterned rewiring device is applied to the insulation device by:

- applying a carrier metallization to the insulation device;
- applying and patterning of a mask on the carrier metallization;
- applying a conductor track metallization in regions of the carrier metallization which are not covered by the patterned mask;
- removing the mask; and
- patterning of the carrier metallization in accordance with the conductor track metallization structure.

Claim 11. (Previously presented) The method according to claim 10, wherein the carrier metallization is sputtered on and/or the mask is patterned photolithographically and/or the conductor track metallization is electrochemically plated and/or the carrier metallization is patterned by etching.

va-141480

Application No.: 10/721,745

4

Docket No.: 5438220#2000

Claim 12. (Previously presented) The method according to claim 1, wherein the solder resist device has a polymer.

Claim 13. (Previously presented) The method according to claim 1, wherein the solder resist device is printed on.

Claim 14. (Previously presented) The method according to claim 1, wherein the solder balls are applied in patterned fashion in a printing process and are subsequently reliquified, preferably in a reflow furnace.

Claim 15. (Previously presented) The method according to claim 1, wherein a multiplicity of integrated circuits on a carrier device, after the application of the solder balls, are separated into individual integrated circuits or groups of integrated circuits.

Claim 16. (Previously presented) The method according to claim 15, wherein a multiplicity of integrated circuits with rewiring devices on the carrier device undergo a functional test prior to the separation.

Claim 17. (Previously presented) The method according to claim 1, wherein the patterned rewiring device is patterned such that it extends laterally beyond the integrated circuit.

Claim 18. (Previously presented) The method according to claim 1, wherein multichip modules are formed, which have different individual ICs.

Claim 19. (Previously presented) An integrated circuit with a rewiring device comprising:
a carrier device with predefined or subsequently patterned cutouts;
at least one integrated circuit upside down on the carrier device such that the defined cutouts of the carrier device are located above at least one connection device of the integrated circuit;

va-141480

Application No.: 10/721,745

5

Docket No.: 5438220-2000

an insulation device on a side of the carrier device which is not covered by the integrated circuit, omitting the at least one connection device in the cutout;

the patterned rewiring device on the insulation device;

a patterned solder resist device on the patterned rewiring device; and

solder balls on sections on the rewiring device which are not covered by the patterned solder resist device.

va-141480